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ABSTRACT

This paper proposes examining cooperative learning from an anthropological perspective and presents a theoretical framework for doing so. The paper first briefly reviews the psychological theory and research underlying cooperative learning. The paper uses data from a pilot ethnographic study of cooperative learning in a fourth-grade classroom to illustrate the power of an anthropological perspective and the theoretical framework, a framework that will be used to guide a future full-scale ethnographic study of cooperative learning. The paper argues that by conceiving of cooperative learning as a complex classroom cultural system rather than as a predictable instructional approach, room is allowed to examine participants' construction of this cultural system. (Thirty-seven references are attached.) (MG)

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AN ETHNOGRAPHIC APPROACH FOR EXAMINING PARTICIPANTS' CONSTRUCTION OF A COOPERATIVE LEARNING CLASSROOM CULTURE

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Running Head -- Cooperative Learning Classroom Culture

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An Ethnographic Approach for Examining Participants' Construction of a Cooperative Learning Classroom Culture

Introduction

I propose that we begin to examine cooperative learning through a different lens -- that of anthropology. The majority of research on cooperative learning has been psychologically based and has relied on quantitative measures. Very little qualitative research has been conducted on cooperative learning, leaving a gap in our understanding of how this complex instructional approach is enacted by groups of students and teachers in various settings. In theory, cooperative learning requires students and teachers in traditional teacher-directed classrooms to reconstruct their concepts of roles, status, procedures, interaction and evaluation. In essence, to effectively utilize cooperative learning students and teachers in traditional classrooms must reconstruct their classroom cultural system. Students exert a great deal of influence on this culture construction due to the limited teacher supervision in cooperative learning. It is essential, therefore, to carefully examine *how* the construction of cooperative learning is accomplished in order to understand the processes and outcomes of this popular and complex instructional approach.

In this paper I will briefly review the psychological theory and research underlying cooperative learning. I will then propose examining cooperative learning from an anthropological perspective, and present a

theoretical framework (drawing upon Erickson, 1982; Eisenhart, 1988; and Ogbu, 1988) for doing so. I will use data from a pilot ethnographic study of cooperative learning which I conducted (Deering, 1988) to illustrate the power an anthropological perspective and the theoretical framework. I intend to use this framework to guide a full-scale ethnographic study of cooperative learning to begin in 1990.

Cooperative Learning Theory and Research

Cooperative Learning Theory

Cooperative learning is a term which applies to a family of instructional techniques, all involving groups ranging from two to six students working together to learn academic content and skills with little or no direct teacher supervision. These groups are frequently heterogeneous by ability, ethnicity and gender when possible. Cooperative learning approaches vary widely in their structure, but they all depend on students actively helping each other to learn. This is promoted through a variety of group and individual incentive systems (Slavin, 1983) as well as through training of students in cooperative skills (Johnson, Johnson, Holubec, & Roy, 1984). In this paper, the term *cooperative learning* will be utilized to refer to any of these group learning approaches unless otherwise specified.

Cooperative learning is based primarily on theories of social and cognitive psychology and has been utilized to promote cognitive, affective and social goals. Enhanced academic achievement is the most common cognitive goal of cooperative learning with metacognitive goals occasionally addressed as well (cf. O'Donnell, Dansereau, Hall, & Rocklin, 1987; Stevens, Madden,

Slavin, & Farnish, 1987). The affective goals of cooperative learning include enhanced self-esteem, self-efficacy and internal locus of control. The social goals include enhanced cross-racial, -ethnic, -gender, -ability or -handicap relations, and peer support for learning (Slavin, 1983).

Cooperative learning approaches are designed to reverse the low probability of success faced by low-achievers in classrooms through a variety of structures including one or more of the following: providing greater academic support than a single teacher can typically offer; group rewards for achievement; evaluation or rewards based on students' performance relative to their own average or that of ability peers (Slavin, 1983; Johnson & Johnson, 1987). Cooperative learning methods attempt to overcome the impetus toward competition or individualism in classrooms with cooperative incentives wherein students are rewarded based on the performance of all in the group (Aronson, 1978; Slavin, 1983; Johnson & Johnson, 1987). These rewards can take a number of forms ranging from recognition to grading.

The combination of a reasonable expectation of success (Kukla, 1972, in Slavin, 1983) and the cooperative incentives (Deutsch, 1949, and Thomas, 1957, in Slavin, 1983) are designed to elicit cooperative behaviors from students such as supporting and encouraging each other, asking for and providing explanations, and listening to each other. In addition, positive intergroup relations are predicated on meeting Allport's (1954) criteria of: "(1) equal status for minority and majority group members, (2) strong institutional support for positive relations, and (3) cooperative interaction or mutual interdependence aimed toward achievement (in Lacy, et al, 1983, p. 132)." The students' physical proximity in their groups, their common task, teacher encouragement and training of cooperative behavior, and the various group incentive structures are designed to promote cooperative interactions and

feelings of mutual interdependence among cooperative group members. The success of the various cooperative learning strategies in promoting positive cognitive, affective and social outcomes, then, is dependent upon students developing the desired behaviors and attitudes in response to the manipulations in the modes of instruction and evaluation.

Cooperative Learning Research

Classroom research on cooperative learning has been conducted since the mid-1970's. The majority of this research has been psychologically-based, and experimental, correlational or descriptive in design. Several reviews of these classroom studies (Slavin, 1983; Newmann & Thompson, 1987; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981) found similar rates (approximately 65%) of positive achievement effects favoring cooperative learning over control conditions of individualistic learning (traditional teacher-directed instruction; students' success unrelated to peers') and/or competitive learning (traditional teacher-directed instruction; peer-referenced rewards). Slavin (1983) notes that in several of the studies the achievement gains made by blacks and possibly hispanic (difficult to determine since they were aggregated with blacks as "minority" in some studies) were far greater than those made by white students. The affective variables examined in these reviews also favor cooperative learning over the control approaches, with enhanced self-esteem and locus of control among the most consistently positive outcomes (Slavin, 1983).

The results of inter-group relations research in these reviews were positive as well, yet by no means consistent: Slavin (1983) found eleven of fourteen studies he reviewed to have some positive effect on intergroup relations (mostly black-white); Weigel, Wiser and Cook (1975) found

improvement in anglo attitudes toward Mexican Americans in a tri-ethnic (hispanic, anglo, black) study; Slavin and Oickle (1981) found more positive white attitudes toward blacks; Gonzales (1979) found more positive attitudes on the part of anglo and Asian-American students toward Mexican-American students; Johnson, et al (1981) found cooperative learning to have positive intergroup relations effects in twenty-nine out of fifty-four studies they reviewed; Ziegler (1981) found more cross-ethnic friendships in a cooperative learning class than a control group among Anglo, recent European immigrants and West Indian immigrants in Canada. Only two studies (Webb, 1984; Johnson, Johnson, Scott, and Ramolae, 1985) examined cross-gender relations and both found males to out-achieve females, controlling for ability. Johnson, et al (1985) found more willingness to work with opposite-sex peers for students in the cooperative, mixed-gender groups of their experiment, yet found that overall, girls were more likely to nominate boys as desirable work partners than vice versa. In addition, Webb (1984) found that females were more likely to be ignored than males, spoke less than males, and tended to focus their attention on males when in majority-female groups.

The Aptitude-Treatment-Interaction (ATI) research reviewed by Webb (1988) offers notable insight into the workings of cooperative learning. By correlating achievement outcomes (controlled for pre-test and intelligence scores) with student interactions in cooperative groups (observed in videotape analysis), Webb has identified certain predictors of student achievement. In particular, these studies indicate that giving elaborated explanations of academic content is a strong predictor of positive achievement for the giver and moderately so for the recipient. In addition, asking for and receiving no explanation is a strong predictor of negative achievement outcomes. The ATI paradigm comprises a major advance in as it allows examination of cooperative

learning as a *dynamic process* rather than a specific, pre-determined "treatment" which can be "implemented" and verified through "implementation checks".

The psychologically-based research on cooperative learning has lent support for this instructional approach as a means of promoting cognitive, affective and social outcomes with students. Additionally, the ATI paradigm has begun to offer some insight into how this is accomplished.

Limitations of Our Understanding of Cooperative Learning

The various cooperative learning approaches have been designed to promote an ambitious range of cognitive, affective and social goals in schools and more often than not, have had positive impact according to the research literature. Nevertheless, there are inconsistencies and anomalies in the research findings which remain inadequately explained within a strictly psychological framework.

The inadequately explained findings in the psychological research on cooperative learning include the differential attitudes, interaction and achievement by gender (Johnson, et al, 1985; Webb, 1988, 1984). As Webb suggested in her 1984 study, gender may be a "status variable" to the students, and math may be perceived as a male domain. In addition, the differential achievement by ethnicity remains unexplained in the psychological literature; Slavin (1983) suggests, "One possible explanation is that there is something in black and Hispanic psychology or culture that makes cooperation a more effective motivational system than competition for minority students (p. 62)." Thirdly, the intergroup relations research (Weigel, et al, 1975; Slavin & Oickle, 1981; Gonzales, 1979) suggests that anglo

attitudes toward other groups may be more affected by cooperative learning than hispanic and black attitudes and begs for a sociocultural framework.

A serious shortcoming of the treatment of race and gender in the psychological studies of cooperative learning is that these complex concepts are reduced to independent, moderator, or background variables. The meanings which students and their teachers attached to these concepts are beyond the scope of the studies described, and to a great extent, beyond the paradigm of psychology generally. Similarly, the social context within which participants construct these meanings receives only a brief mention in the studies where they describe their settings as, for example, middle class, inner city, suburban, etc.

Psychological research has illuminated cognitive, affective and social outcomes, as well as interactional patterns, yet it has not and can not identify how groups of students and teachers come to construct an understanding of cooperative learning in their particular settings. Additionally, psychology cannot illuminate the process by which participants construct meanings for concepts such as race and gender, nor the ways in which those meanings affect the cooperative learning classroom. A sociocultural perspective is needed to begin to understand the ways in which cooperative learning is constructed in particular settings by various participants.

Toward a Socioculturally-Informed Understanding of Cooperative Learning

The Power of an Anthropological Perspective

The concepts and methodologies of anthropology offer a powerful paradigm to explore the ways in which students and their teachers together construct cooperative learning. Anthropology provides a framework for examining cooperative learning as a complex social system rather than a simple instructional method. In addition, anthropology calls for examining the cooperative learning classroom as embedded within a broader sociocultural context, rather than as an isolated entity. The methodology of ethnography can enable the researcher to conduct an extended, in-depth, participant's-eye investigation of the cooperative learning classroom culture.

As Mehan (1979) has pointed out, communicative competence for students requires that they learn not only the correct content for interaction, but the correct form as well. While the students in Mehan's study of reading lessons had the teacher to provide cues and modelling, students in cooperative learning groups are faced with the challenge of developing communicative competence with minimal teacher supervision during the lesson itself. Additionally, they must develop these competencies in an instructional mode which is considerably different (at least by design) from typical teacher-directed instruction. Essentially the students must construct their own participation structures within their groups along with their own norms, roles and statuses. The students have a great deal of influence relative to their teacher in the construction of a cooperative learning classroom cultural system. Theoretically, cooperative learning requires very specific behaviors and attitudes of students yet affords them great leeway in developing them. It

is therefore essential to examine the students' *understandings* of cooperative learning and the sociocultural framework within which they construct them.

Only a few qualitative studies of cooperative learning appear in the research literature (Dashoe, 1982; Logan, 1986; Schoultz, 1986), and of these, only Logan (1986) focused on the nature of the cooperative classroom as it was constructed by the participants. Logan examined a combined fourth and fifth grade class of unspecified ethnicity. He found that despite considerable teaching of cooperative behavior, the students had persistent difficulties with conflict to the degree that some of the groups were incapable of completing their long-term assignment. In addition, the students had clear, enduring concepts of who the more capable students were and afforded more status and attention to these students. By contrast, Logan found the lower ability students to be at a disadvantage in both their level of participation and reward in the classroom.

I conducted a pilot ethnographic study of a fourth grade class which was just beginning to use cooperative learning for math instruction (Deering, 1988). The students were predominantly anglo and working-class, and the teacher was an anglo female. I conducted this study within a larger instructional study on which I was working as research assistant. I focused primarily on one group's social interactions and utilized participant observation with a least-adult protocol (Mandell, 1988), ethnographic interviews, document analysis and non-participant observation to gather data. Data were collected over a five week period during the spring. Spradley's (1979) semantic universals were used to guide paradigm construction in data analysis. My two key informants were males, a choice I made in an attempt to gain maximum rapport in the short duration of my study. This study has obvious limitations in both its internal and external validity due to its short

duration, its lack of ethnic diversity, and the use of only male key informants. Nevertheless, even taking the findings as highly tentative, I believe that this pilot study demonstrates the utility of an anthropological approach to examining cooperative learning.

I had originally intended to examine students' concepts and patterns of friendship in this study but eventually shifted my focus to groupwork interactions. The reason for the shift was twofold: there was no evidence of changes in friendships in either my observations or key informant interviews; and there was a fascinating permutation of cooperative learning being constructed in the group I was observing. The fourth-graders appeared to be having considerably more impact on the "treatment" than it was having on them!

The teacher in my study, Mrs. Farsight, regularly spent ten to fifteen minutes discussing and modelling cooperative behavior and procedures for the students before and after lessons. Johnson and Johnson (1987) are strong proponents of such cooperative skills training and have conducted numerous studies which support this component as promoting positive cognitive, affective and social outcomes. Despite Mrs. Farsight's following the recommendations of these leading cooperative learning theorists, however, the version of cooperative learning that was being enacted in her classroom was considerably different from that described in any textbook or psychological study. Among the more compelling patterns in this classroom were:

Frequent and valued (by students) approaches to working in groups included: working individually on each math problem and then

arguing about the answer; dividing up the assigned problems so that each member only did two or three.

"Helping" included giving answers to other group members and doing the work of a "special ed" teammate.

The students had great difficulty dealing with conflict, both academic and interpersonal. Disagreements over correct answers frequently precipitated heated arguments and on several occasions nearly escalated into fistfights.

Ideal group members should be "nice" and argue little, if at all, according to both key informants. Students were observed several times to back down from a teammate's challenge of their correct answer rather than engage in an argument.

Students' acceptable (by typical classroom standards) responses to undesired teammate behavior were generally passive or indirect -- ignoring, withdrawing, lack of eye contact, soliciting teacher involvement; unacceptable responses were active and direct -- name-calling, grabbing the disputed item, physical aggression. One frequently disruptive and aggressive boy, Mack, was regularly ignored by his group whether he was "on-" or "off-task."

The version of cooperative learning which I observed during this study was considerably different from, and arguably less desirable than, that espoused in textbooks or described in the research reviewed earlier. Rather

than engaging in productive academic debate, the students either argued bitterly or agreed prematurely on answers. This tendency to work individualistically and competitively mitigated against the group engaging in some of the most potentially beneficial aspects of cooperative learning -- peer tutoring (Slavin, 1983) and high-level academic discussions (Webb, 1988). In addition, the generalized ignoring of the disruptive teammate meant that this individual frequently engaged in the type of interaction most predictive of poor achievement (Webb, 1988). The "help" provided to the special education teammate served to maintain his helplessness in math, rather than empower him.

The insights into cooperative learning which I was able to gain from this brief pilot ethnography demonstrate the power of anthropology for examining this, and other, instructional approaches. Anthropology permitted the close participants'-eye view of group interactions and provided a glimpse into the students' meanings for their behavior and identities, as will be described below. It also permitted me to shift the focus of the study from friendship to group interaction when the salience of this latter dynamic emerged.

The power of an anthropological perspective on cooperative learning can be extended by examining the immediate learning environment as embedded in a broader sociocultural context. The brevity of my pilot study did not permit me to pursue salient issues beyond the classroom, but the students' approaches to handling conflict, their conceptions or folk theories about schooling, and their conceptions of "cooperation" appear to be fruitful areas for broader sociocultural contextualization. The disparity between what was ostensibly transmitted by the teacher and enacted by the students in their groups indicates that there may have been influences of the broader

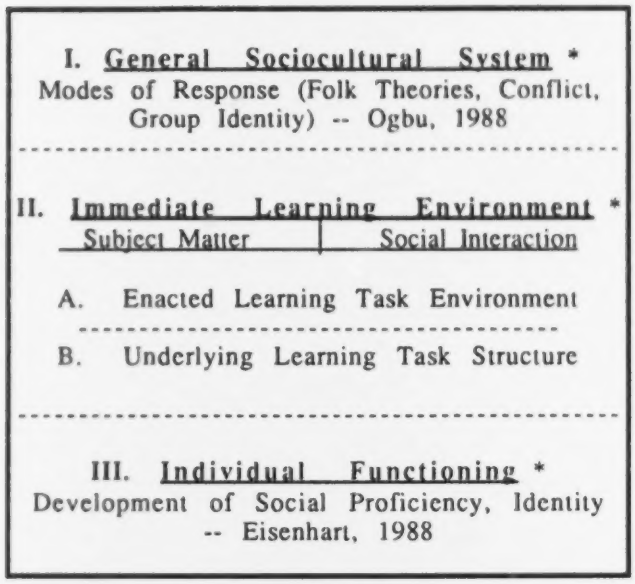
sociocultural system impinging on the construction of cooperative learning in this classroom.

A Theoretical Framework for an Ethnographic Study of Cooperative Learning

Assumptions and Constructs

The overarching assumption which guides the proposal to use an anthropological perspective and this particular theoretical framework is that cooperative learning is such a departure from traditional classroom organization and so complex, that it should be treated as a cultural system to be *constructed* by participants (the teacher *and* the students) and not simply as an instructional method to be *implemented* by the teacher or researcher.

The framework by which I propose to examine cooperative learning (See figure) draws heavily upon Erickson's (1982) "Taught Cognitive Learning in its Immediate Environments: A Neglected Topic in the Anthropology of Education". Erickson offers a framework and rationale for investigating both the manifest and hidden curriculum at levels ranging from the individual to the general sociocultural system. Ogbu's (1981) "School Ethnography: A Multilevel Approach", and his (1988) "Class Stratification, Racial Stratification, and Schooling" provide impetus and structure for going "beyond the playground" in accounting for classroom action. Eisenhart's (1988) "Ideas for the Study of Cultural Acquisition" offers insight into the process by which individuals develop an identity in a cultural system.


I. General Sociocultural System *
Modes of Response (Folk Theories, Conflict, Group Identity) -- Ogbu, 1988
II. Immediate Learning Environment *
Subject Matter
Social Interaction
A. Enacted Learning Task Environment
B. Underlying Learning Task Structure
III. Individual Functioning *
Development of Social Proficiency, Identity -- Eisenhart, 1988

*(Adapted from Erickson, 1982, p. 168)

Erickson posits semi-permeable boundaries (the dotted lines) between these different levels acknowledging that the individual confronts elements, but never the entirety, of the general sociocultural system in his/her subjectively-perceived environment; for example in the cultural meanings for physical materials present, or in the social organization of behavior. The underlying learning task structure is the level at which the broader sociocultural system impinges on the immediate learning environment as subjectively perceived, and in part constituted, by individuals.

Erickson emphasizes the manifest, or intentional, curriculum as a valuable source of insight into the teaching/learning process that has too frequently been overlooked in anthropological studies of schooling in favor of the more exciting hidden curriculum. This redirection of attention to the manifest curriculum is especially appropriate for research into instruction. Erickson draws upon Vygotsky's (1978) concept of curriculum as the "physical

materials, social interaction, and the cultural meaning of both (in Erickson, 1982, p. 165)." This rather inclusive definition of curriculum allows the complexity of the immediate learning environment as encountered by participants to be considered for recreation by the researcher.

A student's learning is both limited and facilitated by the immediate environmental surround, and in cooperative learning this surround is largely constituted by the cooperative group. The unit of analysis in this framework, therefore, is the individual in the immediate learning environment (including physical materials and persons; Erickson, 1982). For classroom research this unit of analysis offers both limitations and possibilities. It presents the pedagogical encounter in an ecological framework, keeping the individual(s) in whom the learning ultimately is internalized, united with the environment with which they interact to construct that learning. This permits illumination of the reflexive adaptive transactions between the individual and the immediate environment, as each stimulates change in the other. The change in the individual can be further illuminated by examining the conscious mental life of the individual learner (Erickson, 1982). Additionally, this focus on the immediate environment as subjectively perceived by the individual *permits* the investigation of influences from the broader sociocultural system, yet does not *presuppose* the salience of any particular such influences. The researcher is relieved of the implicit obligation of investigating the broader sociocultural system on a large scale, yet must uncover influences from that cultural level as they appear salient to the study and post-hole outward from the classroom to investigate them.

An Illustration and Explanation of the Framework

In order to illustrate the utility of this theoretical framework, I will place some of the data and assertions related to a salient issue from my pilot study (Deering, 1988) into the various levels and sections of the model as I explain them. Since the focus of the study was on the social structure of the classroom, the *subject matter* side of the immediate learning environment will be somewhat impoverished. I will begin with the immediate learning environment at the enacted level (II-A, See Figure), then progress to the underlying level (II-B). From there I will pursue the issue at the individual functioning level (III), and finally out to the general sociocultural system(I). Movement into subsequent levels of the framework is done to offer additional perspective on patterns or issues which cannot be adequately explained at the current level.

The theme or continuum containing the concepts of *cooperation*, *individualism* and *competition* consistently emerged in my data. This theme offers an opportunity to flesh out the theoretical framework at all levels with a consistent set of concepts which should serve to highlight the distinctiveness and contribution of the various levels. As a theoretical signpost for comparison with the participants' various enactments and explanations of these concepts, Johnson and Johnson's (1987, citing Deutsch, 1962) definitions can be used: a) *cooperation* involves positive interdependence among students' goal attainments, including the perception that they can reach their goals only if the other students in the group reach theirs; b) *competition* involves students working against each other to achieve a goal that only one or a few can attain; while between these polarities they place c) *individualism*, where students work by themselves ignoring the progress of others, with unrelated goal achievement.

The Immediate Learning Task Environment -- Level II

Erickson (1982) differentiates between the subject matter and social structure in the immediate learning environment at both the enacted and underlying levels, allowing investigation of both the content and form of curriculum. At the enacted level the subject matter task structure includes the physical materials as well as meta-content cues toward task completion, while the underlying level includes the information and sequencing of steps in subject matter comprehension. This highly elaborated view of subject matter permits illumination of the academic content manifestly presented in the classroom, along with the underlying assumptions and meanings for this material which derive from broader sociocultural levels as well as from individuals. The social task structure is similarly differentiated at the enacted level into the sequencing of interaction and actions of those engaged in interaction, and at the underlying level into the status sets and roles and social participation structure. Like the subject matter framework, this multi-level perspective on social interaction provides a lens for examining the observable behaviors of participants at the enacted level as well as the underlying organization and meanings of these behaviors.

The Enacted Level -- Level II-A

As mentioned earlier, one point that struck me early in the study, was that the students were structuring their behavior in a manner that was not textbook cooperative learning -- not by *any* textbook. Their versions of cooperation and their use of individualism and competition differed from those with which I was familiar in the cooperative learning literature. Three

examples of cooperative learning as enacted by my focal group will illustrate this point.

1. Mrs. Farsight, the teacher, frequently introduced the lessons with approximately ten minutes of explanation and modelling on how to cooperate on the learning task. On one particular occasion, she said:

> As a group, as a TEAM, I want you to solve the story problems. We're not using a leader today. Not, "Everybody do it and we'll see who's got the right answer." Maybe I don't understand, so I ask Janie and Kurt and we all figure it out together.

Following this introduction, my group received its one worksheet whereupon group member Dara grabbed it and declared, "Alright, there's twelve problems so that means we each gotta do two!" The group proceeded to work individually with minimal discussion. In this instance, the group enacted a social interaction system that apportioned the work for individual completion obviously contrary to the teacher's directions. They were cooperating, however, by swapping answers afterward. The physical materials through which they completed this task consisted of a single worksheet containing twelve arithmetic story problems.

2. Another approach to group learning which I observed frequently was that the whole group would work independently on the same arithmetic problem, racing to be first finished and then, "We all get a turn to say what we think." This usually consisted of an argument about the correct answer. Here again, was a version of cooperative learning which included an element of individual

competition in the attempts to assert the chosen answer, along with the cooperative aspect of sharing and discussing (or arguing about) those answers. In most of these cases the students had individual physical materials consisting of textbooks or worksheets with arithmetic problems.

3. A third example of the group's approach to cooperation which I observed frequently, was that group members, particularly the girls, would do Rocky's work for him. Rocky was identified by the district as Learning Disabled/Behavior Disordered, and known to his classmates as "special ed". The girls' zealousness to "help" Rocky often resulted in their racing to be the first to complete a problem so they could do it for him. In this example the students had a concept of cooperation -- helping the "special ed" student -- to which they were quite committed (to the point of competing to enact it), yet which was counterproductive according to research (Webb, 1988). The physical materials in this case usually entailed Rocky's own answer sheet, or his individual worksheet.

These three examples illustrate the salience of the concepts of cooperation, individualism and competition to this group of students. In addition, they illustrate the juxtaposition of these concepts in the group's behavior in ways that are not entirely comprehensible at the enacted level of the immediate learning environment. Cooperative learning, as it was being enacted by this group, was not simply the instructional method being "implemented" by the teacher. The students were actively participating in the construction of a learning approach that drew upon the teacher's instructions as just one among a number of influences. The underlying level of the

immediate learning environment is the next level at which to pursue these influences and their meanings for participants.

The Underlying Structure -- Level II-B

In each of the cases cited above, the subject matter task structure required complex cognitive processing. In most of the lessons observed, the students were working on story problems which required decisionmaking about the types and sequence of arithmetic operations called for as well as the application of one or more such operations. This underlying subject matter task complexity would logically seem to lend itself to considerable discussion about procedures and strategies among students, as well as peer-tutoring. There was much attempted tutoring in example 3, but overall, there was more emphasis on answers -- providing them and arguing about them -- than on how to derive them. The underlying subject matter task structure then, does not sufficiently account for the cooperation, individualism and competition in the enactment of the task.

The underlying social task structure offers some insights into the enacted task, particularly in terms of the participation structures. The first of the examples described seems typical of a teacher-led participation structure, which had been the norm in this classroom just prior to this study. Dara approximated the role of teacher, or leader, by issuing directives and the group followed. The approach to the learning task was primarily individualistic, and hence, quite consistent with typical teacher-directed lessons. While the second example involved problem-by-problem discussion, the students were working individualistically and then competing for answer primacy in the selection of the answer. The functional slots for interaction consisted of structuring statements such as, "Everybody work on number 2,"

and assertions such as, "The answer's 42!" The third example extended this participation structure, as students competed-to-cooperate in helping Rocky after having completed the problems individualistically. In each of the three examples, the participation structures operating within the group were constructions of the students', and not directly attributable to the teacher's pre- and post-lesson directions. Only the helping of Rocky could be traced to the teacher, although the form which this help took, could not.

Participant-observation helped to identify some of the roles of participants (described here in my terms) within this enactment of cooperative learning which I was later able to begin to understand at the individual functioning level (III), in the participants' terms. As noted above, Dara was able to assume the role of *leader* by grabbing the worksheet and asserting herself. It must be noted that the form and content of her directive fit typical teacher style, and likely contributed to her success. Rocky appeared to be playing a role of *helpless* or *special ed* (participants' term) as he rarely put his own pencil to his paper, engaged in little visual or verbal contact, and almost never volunteered any verbal input regarding the math task. The role of *helper* was played by all of the other group members at one time or another, and consisted of doing Rocky's work as noted, providing answers and procedural information (such as the page number), and occasionally explaining how to solve a problem. Another role that appeared to be held by Mack in reflexive calibration with his peers was *pariah*. On numerous occasions I observed the group, and occasionally the whole class, avoid looking at or speaking to Mack. I use the term "avoid" because this non-acknowledgement (lack of eye-contact or verbal interaction) required considerable effort, as Mack was active and aggressive verbally and physically, and frequently out of his seat. In an analysis of attention-getting

behaviors ranging from passive (Rocky's helplessness) to active (touching another person or speaking to them) I found that Mack was the only student in the class to receive substantially less than a 100% response rate, at approximately 75%. He was almost as likely to be ignored when engaging in acceptable (by typical teacher standards) behavior at a 77% success rate, compared with unacceptable behavior at 71%.

Once again the concepts of cooperation-individualism-competition appear to strongly influence the enactment of cooperative learning by the participants. The roles of *leader, helpless/special ed, and helper* fit within the conceptual arena bounded by these concepts, although *pariah* is more problematic. The persistence of competition and individualism in the group's enactment of cooperative learning -- both in terms of the roles and participation structures -- remains unexplainable at the underlying level of the immediate learning environment (II-B). The inadequacy of the immediate learning environment requires pursuing these concepts to other cultural levels -- to the individual functioning level (III) to explore individuals' understandings of these concepts, and to the general sociocultural system (I) to illuminate sources from which participants might be drawing them.

Individual Functioning -- Level III

At the individual functioning level (III) of Erickson's (1982) theoretical framework further elaboration can be gained by integrating the work of Eisenhart (1988). She offers several concepts for studying the process of cultural acquisition by individuals which can be applied to cooperative learning classrooms. Eisenhart (1988, citing Holland, 1986) presents a set of co-developing processes through which novices internalize meaning systems in cultural settings: 1) developing social proficiency; 2) developing

knowledge of the available code(s); and 3) developing a valued identity, and an emotional commitment to it. Theoretically, students in a cooperative learning classroom could be expected to distribute themselves along a continuum ranging from the most minimal social competence with little knowledge, and no or low commitment, to being highly socially competent, expert, and seriously committed to their identity in the cultural system. Eisenhart (1988, p. 9) further differentiates individuals' responses to developing awareness of and proficiency with available social identities as: "a) acceptance (agreement to try on or out some aspects... consistent with one's interpretation of the attributes of the identity...); b) rejection (renunciation of some aspects of the social styles...or the commitment associated with a social identity); c) contestation/debate (questioning of...testing the limits of a social identity...)."

As I have theorized and as my data seem to indicate, students exert a great deal of influence on the construction of the cooperative learning classroom cultural system and its available identities. I pursued individual participants' understandings of "how to do cooperative learning" in ethnographic interviews with my two key informants, Mack and Kurt, and with the classroom teacher. Kurt was soft-spoken and bright (a participant in the district's gifted and talented program), while Mack, as noted, was rambunctious and also bright (by the teacher's description). I attempted to elicit elements of both the ideal and real aspects of cooperative group member behavior as perceived by these participants. This data lends insight into the cultural system which framed, and which was in part constituted by, the roles which these participants saw as available to them. Once again, the concepts of cooperation, individualism and competition were an underlying theme in the data.

Kurt and Mack described several ideal ways to work in a cooperative group. Their explanations are consistent with the three examples described earlier in which their group divided up the workload, worked independently except to argue about the answers, and did the work for Rocky. Both boys seemed to know and agree about the rules for working in their cooperative group. Kurt described *quick workers* thusly: "Just like try to figure out the answer real quick and Hilary and I will compare answers so if she got it wrong or if I did we can figure it out." Despite their considerable differences in interpersonal style, both boys informed me that a good cooperative group member should act *nice* . From Mack: "You just gotta be like, nice. Not argue too much." He elaborated that if he were in a new group, to get the members to talk to him he would, "Be nice. Not argue. I start talking to them a lot and agreeing with them in math. Help them figure out if it's wrong." Kurt explained nice as, "just be quiet when the teacher talked. And just all get to be friends and never fight, and just play with each other." Among Kurt's explanations of *cooperation* were, "Rocky keeps messing up so we help him," and, "Well people in my group help people that are stuck."

Mack and Kurt had plenty to say about undesirable ways to work in cooperative groups as well. The opposite of being nice was *jerks*, for Mack, and *disruptive behavior*, for Kurt. Mack said that in the eyes of his teammates he was a, "jerk. Noise. I don't act really nice. I mean disturbing...I disturb a lot....That's what they'd like -- That's what they think!" Kurt explained *disruptive behavior* as, "Like if you're yelling, or mad or if you're not listening to the teacher. Like it's the opposite of cooperation." Both boys mentioned conflict, and specifically *arguing* as a highly undesirable aspect of group work. From Kurt: "Sometimes they, everybody, like we always get into arguments. Dara started arguing with Hilary and giving examples. Rocky and

Mack almost got into a fistfight." As Mack mentioned above, he would try to gain acceptance in a new group through the tactic, "Not argue too much...and agreeing with them...."

Kurt explained that the group dealt with Mack's *disruptive behavior* by making him a *pariah* (my term): "See, where Mack was playing around and we heard all the instructions and we wouldn't tell him what the answers were. Just messing around in his desk so he didn't hear. And we wouldn't tell him. He got mad and started trying to grab the papers and stuff." For his part, Mack was well aware of his status and exclaimed, "[They're] jerks! They won't tell me the answers when I come back from the bathroom. [I get] mad!"

Kurt describes an essentially individualistic approach to solving math problems in his description of *quick workers*, with only a cooperative check on the answers. Both informants note that good cooperative members are *nice* and don't argue much, which is consistent with the indirectness and inappropriateness (for classrooms) of responses to conflicts which I noted at the underlying level of the immediate learning task environment (II-B) and described earlier. The boys indicate an aversion to their frequent individualistic-competitive pattern of working alone on problems and then arguing about the answers, yet they provide no clear explanation of why they persisted in this pattern. Kurt and Mack both support the cooperative concept of helping teammates. Both boys offered vivid descriptions of the group's sanctioning of Mack for his *disruptive behavior*.

Using Eisenhart's (1988) cultural acquisition concepts to examine these individuals' relative competence and attitudes about developing identities illuminates the complexity of the social task confronting them and their peers in the cooperative learning classroom cultural system. Cooperative learning was new to this class and to these participants. Neither boy's social

proficiency was close to the level of an *expert* , who "understands, acts, and learns from results without any conscious awareness of the process (p. 8)." Kurt and Mack could be classified as *competent* , however, as they were able to "choose a plan or perspective from which to view a situation and then implement rules in order to pursue the plan (p. 7)." Kurt, and his teammates, had developed a plan for coping with Mack's *disruptive behavior* and regularly implemented it. Additionally, I observed Kurt to adopt a plan of working ahead on his own several times because, "sometimes I can't get done in time 'cause of the group." Mack was quite aware that his group was ignoring him because of his *disruptive behavior*. He was also aware of other rules of operating as a group member as well, for example the importance of avoiding arguments.

Each boy had some knowledge of the available codes in the meaning system of their cooperative classroom culture, as they were able to describe behaviors and procedures which marked various statuses and roles. Since cooperative learning was quite new for all these participants it could be expected that the array of statuses and code systems would increase in complexity over time, and the participants' knowledge would likely do so as well.

Mack and Kurt appeared to be developing quite different identities within the cooperative learning classroom culture at the time of the study. Kurt wanted to be seen with the identity of one who is *nice* , and who *helps* . He had devised strategies by which he fulfilled these role markers while still taking care of his own needs to "get done in time" as well. Mack, however, could be more readily classified as contesting or debating about his role in the cultural system. He sometimes worked on the group assignments and expressed valuing of the role of being *nice* , yet he also equivocated about

whether he "disturbed a lot" or was a *jerk*. Mack seemed to be developing an identity which included elements of *nice* and *jerk* both, which while it caused his group to ostracize him also afforded him a certain notoriety which he gleefully acknowledged in our interviews.

The individual functioning level (III) of the cooperative learning classroom cultural system offers a window on participants' development of identities in that system as well as their understanding of how to make the system "work". The elements of individualism and competition in the participation structures identified at the underlying level of the immediate learning environment are more thoroughly explained in the participants' own words. Additionally, the array of roles and statuses available, as well as attempts to develop identities within the cultural system become more visible from the eyes of the participants. At the same time, however, the persistence of individualism and competition in the participants' construction of cooperative learning remains difficult to understand, and becomes even more puzzling given the informants' aversion to the arguing that accompanies their competitiveness. It is necessary then, to pursue the theme of cooperation-individualism-competition to broader levels of the sociocultural system (I) in search of explanations for the participants' enactment of them in their cooperative learning classroom cultural system.

The General Sociocultural System -- Level I

Ogbu (1988) offers an elaborated schema for interpreting the influence of the general sociocultural system on the learning environment (II) which adds further structure to Erickson's (1982) framework at this level, especially for the study of cooperative learning in classrooms which contain minority students. In "Responses to Racial Stratification in Schooling (1988, p. 175)",

Ogbu presents several modes of black collective responses to the institutional and societal racism they encounter in schools: Black Folk Theories of "Making It"; Overt/Covert Conflicts with Whites and White Controlled Institutions; Ambivalent/Oppositional Identity and Oppositional Cultural Frame of Reference. The folk theories of making it which value non-academic approaches to succeeding in life, are an instrumental response of blacks to their long odds of improving their lot via schooling in our social and economic system given the job ceiling they face. The conflicts described by Ogbu in the second category refer to the distrust felt by blacks toward white-controlled institutions, including schools; according to Ogbu, this is a response mode to which black children are socialized early in life. The oppositional identity and oppositional cultural frame of reference are expressive responses of blacks and other minorities to their historical exploitation in our society, and constitute a sense of collective identity or fictive kinship which includes opposition to the dominant culture.

Ogbu's (1988) modes of collective response to schooling provide schema for the examination of the influence of the general sociocultural system on the immediate learning environment as encountered and constructed by cooperative learning participants. Trueba (1988) cautions against assuming the salience of any particular structural constraints among minority students in schools, and against perceiving any group as homogeneous. Consistent with his caveat, none of Ogbu's (1988) modes of response is presupposed in the cooperative learning classroom. It is likely, however, that some collective responses will be encountered. In refusing to assume the salience of such responses, the researcher has the opportunity and responsibility to illuminate *if* and *how* they are enacted in the immediate learning environment. This stipulation can serve to bridge some of the gap between microethnography

and structural theory by accounting for the enactment of structural constraints in the immediate learning environment.

The search for the influences from which my participants were drawing their persistent competition and individualism in constructing cooperative learning led in two directions which were beyond the scope of the study -- to the pre-cooperative learning classroom, and to the general sociocultural system within which the classroom was embedded. Following is speculation based upon my data and other studies which can help to illuminate what these broader levels of investigation might yield.

It is likely that many of the procedures the students were using for cooperative learning in my study were simply holdovers from their prior classroom procedures. They had been using a far more traditional teacher-directed approach to mathematics instruction in this classroom prior to trying out cooperative learning. The students had been seated in rows facing the teacher and chalkboard. Evidence from informal conversations with the teacher and students suggests that schoolwork, especially in mathematics, was essentially an individual task prior to this study. This could account for a great deal of the students' proneness to constructing an individualistic approach to cooperative learning. Even if this is the case, however, the source of this individualistic approach to schooling for the teacher, school and students necessitates a broader sociocultural perspective. Likewise the competitive nature of cooperative learning as constructed in this classroom requires sociocultural contextualization.

Drawing upon Ogbu's (1988) collective responses to schooling, the competition and individualism could be seen as an influence of a folk tale of "making it". The students' persistent competition and individualism in spite of the teacher's implorings to cooperate raises the question of just how well

cooperative behaviors and attitudes map onto participating students' cultures -- both their home and school cultures. Mainstream (white, middle class, androcentric) American culture and our schools are steeped in imagery and myths of individualism and competition. MVPs, League Champions, Prom Queens and Kings, Super Bowl Champions, Miss America, cheerleaders and basketball players who make the final cut, first chair violinists, and spelling bee and science fair winners are lionized. Even in team sports, we find ways of singling out especially noteworthy individuals for recognition. Eight years of rhetoric from the Reagan administration about up-by-the-bootstraps initiative, and competing with the Japanese and Russians have bolstered the sense that individual effort and competitiveness are the ways to get ahead in America and the world.

Goldman and McDermott (1987) examined the role of competitiveness in a white, middle class middle school and found it to be a pervasive and enduring influence in the school and community. Teachers regularly held in-class and whole-school contests using competition as a "motivator", and met student resistance when they occasionally downplayed it. It appears then, that a white middle class folktale about "making it" includes strong elements of individualism and competition -- potentially in combination with cooperation, as in team sports, but resistant to displacement by cooperation. It seems that when white middle class students are told to "cooperate" in learning teams, there is a fair likelihood that they will not understand what is meant, or that they will simply respond with an unvoiced, "Yeah, sure."

A substantial body of research indicates that some minority groups are more prone to cooperation and less to competition than anglos. Research by Fordham and Ogbu (1986; Fordham, 1988) suggests the potential for a synergistic mapping of a cooperative learning classroom culture onto black

peer culture in school. The collective identity, or fictive kinship, of the black students in the inner city high school they examined could conceivably provide the structure for supportiveness and sanctions for a cooperative classroom culture with the help of a dynamic and insightful teacher. Additionally, Little Soldier (1989) suggests a fortuitous match of cooperative learning approaches with many Native American cultures' common values of sharing and cooperation. Further evidence for this harmonious combination of classroom and Native American culture can be found in the work of Phillips (1972) who noted that the Warm Springs Reservation children were far more comfortable and successful in school activities which permitted them to work in groups rather than individually. The values of family and cooperation common in Chicano culture suggest a high degree of compatibility with cooperative learning as well (Ramirez and Castaneda, 1974, and Kagan, 1977 & 1984, in Kagan, 1986). Additionally, low income is associated with cooperativeness among anglos and minorities (Kagan, 1984, and Knight & Kagan, 1977, in Kagan, 1986). Finally, there is considerable evidence that gender plays a role in competitiveness/cooperativeness in American society, with males more likely to be competitive, and females more cooperative or group-oriented (cf. Gilligan, 1982).

The interplay of the concepts of cooperation, individualism and competition with ethnicity, gender and socioeconomic class in the construction of a cooperative learning classroom culture would make for a fascinating ethnographic study. It is curious that an instructional approach which appears more compatible with minority, female and lower socioeconomic group than mainstream cultural traits has gained such popularity in American schools. This issue begs for a sociocultural context on the study of cooperative learning.

At any rate, the examination of the general sociocultural system within the framework for studying cooperative learning is guided by the assumption that some indeterminate elements of this level of culture will have salience in the immediate learning environment. The frameworks of Erickson (1982) and Ogbu (1988), along with the cautions of Trueba (1988) offer a theoretical lens for conceptualizing and investigating the nature of this impact.

Conclusions and Implications

Research into cooperative learning has contributed to the interest in this instructional approach because it has been shown to promote a variety of positive cognitive, affective and social outcomes. The processes by which this instructional methodology achieves or fails to achieve its goals, however, remain largely unexplained. As some of the leading cooperative learning researchers (Slavin, 1983; Webb, 1984) have noted, a sociocultural perspective is needed to begin to explain the impact of gender and ethnicity. An anthropological perspective offers a natural complement to the substantial body of psychologically-based research on cooperative learning.

By conceiving of cooperative learning as a complex classroom cultural system rather than a predictable instructional approach we allow room to examine participants' construction of this cultural system. This intellectual space is further enhanced by examining both the manifest and hidden curriculum and utilizing a broad definition of curriculum. The focus on the individual in the immediate learning environment keeps the emphasis "where the action is" for an instructional study, yet it allows and requires investigation of multiple levels of society and culture. Anthropology can

make a substantial contribution to instructional practice in education by beginning to develop faithful, socioculturally contextualized pictures of participants' construction of cooperative learning classroom cultures.

I hope that by conducting an ethnographic study of cooperative learning in an ethnically diverse setting, utilizing the theoretical framework described, that I can make several contributions to education and anthropology. I hope to contribute to a better understanding of the ways in which cooperative learning works with, and is worked upon by, participants from varied antecedent groups. Additionally, I hope to demonstrate the utility of a multi-level anthropological framework for examining classroom instruction. Finally, I hope to illustrate the power of bringing multiple theoretical perspectives to bear -- in this case psychology and anthropology -- on classroom instructional research.

Cooperative learning methods are designed to promote some of the most laudable goals in American education -- higher academic achievement for all types of students, improved inter-group relations, and increased self-esteem and motivation toward learning. With a clearer and socioculturally-contextualized perspective on cooperative learning we can expect to pursue these goals more confidently and successfully.

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